

Work Order ID: 78392

78392

Page 1

January-09-12 8:53:51 AM

Item ID: D206-642-241

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: M.L.S

Date: 12/01/09 Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2650

Rev F

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-241

CHG005

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D2650

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number DescriptionBatch

A/R Aluminum Rod M120164

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg 2650 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D2650

7-Open holes for Aft end cap as per Dwg D2650 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt 8167.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

SAD 12-04-11

SAD 12-04-17

SAD 12-04-17

SAD 12-04-17

SAD 12-04-18

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D2650

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D2650

15-C'sink GHW rivet holes as per Dwg D2650

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

SAD 12-0418

S 12/04/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NS1

Revision ID:

Item Name: Replacement Skidtube

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NS2

Start Date: 09/01/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Open crossbolt holes to Ø0.3125"

2-Drill pilot holes using DT8028-3, then open to Ø0.297" as per Dwg D2650.
Open Aft cap hole #6.

3-Deburr tube and blow out chips from inside the tube

① SAD 12-09-18

140

140

HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

HG 12-4-18

150

150

QC

Quality Control


QC3- Inspect Part Finish

0.00

Memo

0.00

DD 12-4-19
PTO

W/O: 78392		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-4-19	150	Stand not QC7		12-4-19			

Part No: D206-642-541 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Work Order ID 78392***78392***

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Item ID: D206-642-241

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N900040100Setup Start ***NS1***

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Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Skidtubes	0.00							
160									
Skidtubes	Memo	0.00							
Skidtubes	1-Open holes to finished size as per Dwg D2650, D2650-3 Drilling Detail (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D2650(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								
170	QC6- Inspect dimensions to drawing	0.00							
170									
QC	Memo	0.00							
Quality Control									

DC 12/04/19

DP 12-4-19

W/O:		WORK ORDER CHANGES					
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Item ID: D206-642-241 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Replacement Skidtube
 Start Date: 09/01/2012 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 23/01/2012 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180

0.00

180

Skidtubes

0.00

Skidtubes

Memo

1-Locate, install and rivet doublers as per Dwg D2650. Micro-shave rivets as required

- DE 12/04/19

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 12/04/19 Time: 10:30

Finish Date: 12/04/23 Time: 4:00

Pick:

Qty Part Number Description Batch

A/RSikaflex-291 121221

Sikaflex expire date: 13/01/04

DE 12/04/19

190

QC5- Inspect part completeness to step on W/O

0.00

190

QC

Memo

0.00

Quality Control

1 0 12/04/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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1

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Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200

0.00

200

Skidtubes

Skidtubes

Memo

0.00

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch
A/RAluminum Rod M/20164

3-Grind welds flush as per Dwg D2650.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D2650. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod NOVE BE 12-04-25

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D2650. Deburr

BE 12-04-23
CF 12-4-24

M/CC 12-4-25

W/O:		WORK ORDER CHANGES					
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1

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	HandFinishing	0.00							
210	HandFinish	0.00							
Hand Finishing	Memo Install D2680-041 Nut Plate as per Dwg D2650	0.00							
220	QC10- Inspect visual per QSI004- ground welds	0.00							
220	QC	0.00							
Quality Control	Memo	0.00							
230	QC5- Inspect part completeness to step on W/O	0.00							
230	QC	0.00							
Quality Control	Memo	0.00							

Handwritten: N 1cc 12-4-25

Handwritten: S rlcub5

Handwritten: Qc9 - [Signature] 12-04-25

Handwritten: S rlcub5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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 Required Date: 23/01/2012 Req'd Qty: 1.00 ***1*** Customer:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240	Pressure Wash per QSI005 4.3	0.00							
240									
HandFinish	Memo	0.00							
Hand Finishing	Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.								

250	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
250									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 12:50 OVEN TEMPERATURE: 320°F FINISH TIME: 1:20								

260	QC3- Inspect Part Finish	0.00							
260									
QC	Memo	0.00							
Quality Control									

Handwritten notes and signatures:

- UG 12-4-26
- IX
- M-F 12/24/26
- 1
- BL 12-4-26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
310	Packaging	0.00							
310									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-664-241								
	Location: _____								
	PPP Rev: _____								
320	QC21- Final Inspection - Work Order Release	0.00							
320									
QC	Memo	0.00							
Quality Control									

12/05-3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Picklist Print

January-09-12 8:53:55 AM

Page 1

Work Order ID: 78392

78392

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: 04.12.02 Revised procedural steps KJ/JLM IPP RevP: revise and update route/bom DD 10.01.06 verified by: ECIPP rev Q 10.02.19 per PAR 09-043 EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2620

Manufactured

No

110

Each

28.0000

1

1

D2620

Skidtube, 206 Skidtube

**

SAD

12-04-11

Location

Loc Qty

Loc Code

LG

28

71616

1

71617

6

75587

2

76815

6

76817

10

76819

3

382028

①

D3286-1

Manufactured

No

110

Each

146.0000

2

2

D3286-1

Doubler

**

SAD

12-04-19

Location

Loc Qty

Loc Code

LG002

146

74872

6

75484

22

379556

②

D2647

Manufactured

No

110

Each

164.0000

1

1

D2647

Cap

**

BE12-04-16
B79563

Location

Loc Qty

Loc Code

LG002

164

73826

55

75482

109

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2654-3 Manufactured No

180 Each

3.0000 1 1

D2654-3

Web

**

De 12/04/19

Location 1382106

Loc Qty

Loc Code

LG

3

73442

3

CR3212-4-04

Purchased No

180 Each

11,769.00 52 52

CR3212-4-04

Cherry Rivet

**

De 12/04/19

Location

Loc Qty

Loc Code

ST331

1779

116471

78

117816

3

118686

1

118840

16

119017

1671

119075

10

st510

9990

119075

9990

52

W/O:		WORK ORDER CHANGES					
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Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured

No

200

Each

294.0000

18

18

D2649

Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG001

294

65317

1

68224

2

68507

11

71355

2

72704

2

72841

11

73390

8

73857

21

73858

53

73859

4

73860

4

76793

175

BE 12/04/23
B 79564 x15
B 79566 x3

D3286-3

Manufactured

No

200

Each

180.0000

2

2

D3286-3

Spacer

Location

Loc Qty

Loc Code

LG

100

78015

100

LG001

80

74117

1

76773

79

BE 12/04/25
B 79557 x2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 8:53:55 AM

Work Order ID: 78392

78392

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041

Manufactured No

210 Each

140.0000 1

D2680-041

Nut Plate

**

12-4-25

Location

Loc Qty

Loc Code

ST013

44

75479

44

ST019

96

76790

96

CR3212-4-03

Purchased No

210 Each

1,716.000 2

CR3212-4-03

Cherry Rivet

**

12-4-25

Location

Loc Qty

Loc Code

FP002

724

114859

724

ST331

992

110139

2

119017

990

CCR264SS3-3

Purchased No

210 Each

947.0000 2

CCR264SS3-3

Cherry Rivet

**

12-4-25

Location

Loc Qty

Loc Code

ST331

947

113973

2

117849

139

119017

806

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 8:53:55 AM

Page 5

Work Order ID: 78392

78392

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

270 Each

130.0000 1 1

D2646

Aft Cap

**

1 (2P) 12/04/26

Location

Loc Qty

Loc Code

FP002

79562✓

130

62678

5

68280

5

70945

1

71038

4

71070

2

73294

1

73825

112

D2651-1

Manufactured No

270 Each

225.0000 18 18

D2651-1

Plug

**

18 (2P) 12/04/26

Location

Loc Qty

Loc Code

FP001

81995

225

57869

1

66445

10

69018

2

70839

2

71037

31

73827

179

AN960JD416

* NAS1149D0463J Purchased

No

81954✓

270

Each

0.0000 1 1

AN960JD416

Washer

**

1 (2P) 12/04/26

121255✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 8:53:55 AM

Page 6

Work Order ID: 78392

78392

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-3 Manufactured No

270 Each 715.0000 18 18

D2651-3

O-Ring

**

18 (2P) 12/04/26

Location

Loc Qty

Loc Code

FP001

78126 ✓

715

61962

12

73828

703

MS27039-1-08

Purchased No

270 Each 1,053.000 46 46

MS27039-1-08

Screw

**

46 (2P) 12/04/26

Location

Loc Qty

Loc Code

ST291

121011 ✓

1053

117423

77

118910

102

119075

374

119109

500

ALS4-1032-130

Purchased No

270 Each 1,684.000 44 44

AI S4-1032-130

Insert

**

44 (2P) 12/04/26

Location

Loc Qty

Loc Code

ST280

120837 ✓

1589

119084

1589

ST281

95

119632

95

MS27039-4-06

Purchased No

270 Each 304.0000 1 1

MS27039-4-06

Screw

**

1 (2P) 12/04/26

Location

Loc Qty

Loc Code

ST292

304

119075 ✓

304

January-09-12 8:53:55 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 8:53:55 AM

Page 7

Work Order ID: 78392

78392

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN960JD10L ~~✗~~ NAS1149D0332J ✓ Purchased No

***AN960JD10I ***

Washer

D3537-1 Manufactured No

D3537-1

Wearpad

120644 ✓

**

46

(28)

12/04/26

**

4

(28)

12/04/26

Location

Loc Qty

Loc Code

FP002

Q3255 ✓

24

69817

5

77036

19

D3537-3 Manufactured No

D3537-3

Wearpad

**

1

(28)

12/04/26

Location

Loc Qty

Loc Code

FP002

78836 ✓

12

76986

12

D3535-13 Manufactured No

D3535-13

Wearshoe

**

1

(28)

12/04/26

Location

Loc Qty

Loc Code

FP001

80327 ✓

4

74616

4

D3536-13 Manufactured No

D3536-13

Gasket

**

1

(28)

12/04/26

Location

Loc Qty

Loc Code

FP002

78964 ✓

3

72880

3

January-09-12 8:53:56 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 8:53:56 AM

Work Order ID: 78392

78392

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-21

Manufactured No

270 Each

7.0000

1

1

D3535-21

Wearshoe

**

1

(2P)

12/04/26

Location

Loc Qty

Loc Code

FP001

78987 ✓

7

70380

7

D3536-21

Manufactured No

270 Each

5.0000

1

1

D3536-21

Gasket

**

1

(2P)

12/04/26

Location

Loc Qty

Loc Code

FP002

78966 ✓

5

70464

5

D3535-33

Manufactured No

270 Each

11.0000

1

1

D3535-33

Wearshoe

**

1

(2P)

12/04/26

Location

Loc Qty

Loc Code

FP001

11

70383

1

70462 ✓

10

D3536-33

Manufactured No

270 Each

19.0000

1

1

D3536-33

Gasket

**

1

(2P)

12/04/26

Location

Loc Qty

Loc Code

FP002

19

70382

3

70465 ✓

16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

UNCONTROLLED COPY
SUBJECT TO
WORK ORDER
NO. 7839.2 M.C. J
12/01/09

RELEASED
08-07-23-17

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	REMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW; INCCRP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED	J	DRAWING NO.	REV. F
MFG. APPR.	B	D2650	SHEET 1 OF 6
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

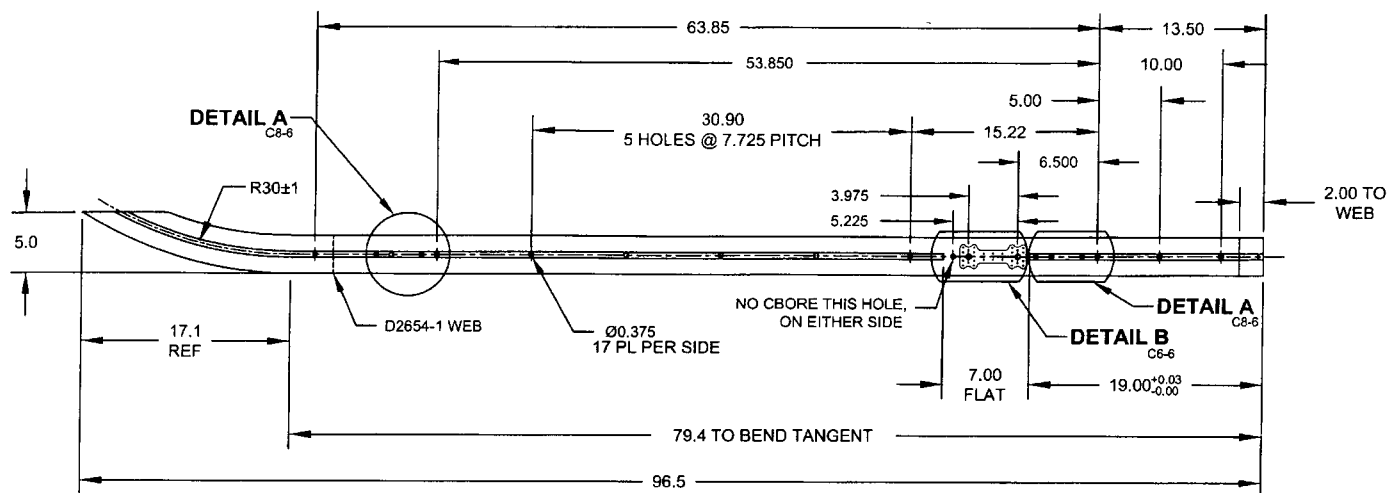
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

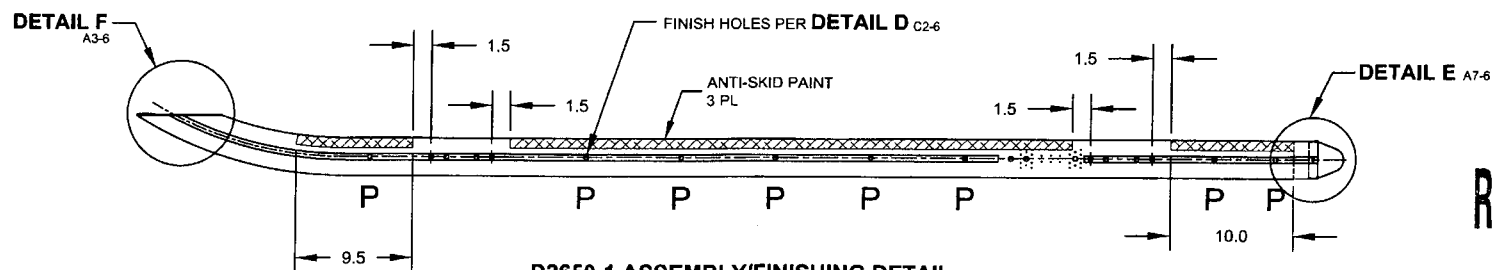
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78392







D2650-1 BENDING/DRILLING DETAIL



D2650-1 ASSEMBLY/FINISHING DETAIL

RELEASED
680922/115

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 2 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

5.0

R30±1

DETAIL A
C8-6

68.50

63.50

53.500

30.90
5 HOLES @ 7.725 PITCH

14.87

6.500

3.975

5.225

2.00 TO WEB

DO NOT CBORE THIS HOLE,
ON EITHER SIDE

Ø0.375
18 PL PER SIDE

7.00
FLAT

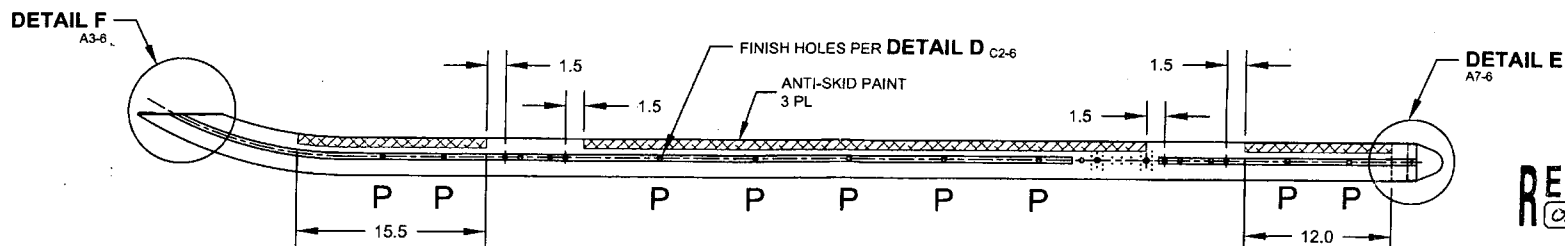
21.00^{+0.03}_{-0.00}

DETAIL B
C8-6

17.1
REF

87.0 TO BEND TANGENT

104.1



RELEASE
08 07 22 119

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

5.0

R30±1

DETAIL A
C8-6

92.25

82.250

43.63

35.900

28.18

17.950

10.23

30.90

5 HOLES @ 7.725 PITCH

Ø0.375
19 PL PER SIDE

2.500

2.500

2.00 TO WEB

D2654-5 WEB
Ø0.625
THIS LOCATION ONLY
BOTH SIDES

17.1
REF

100.3 TO BEND TANGENT

117.4

DETAIL A
C8-6

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. F
MFG. APPR.	<i>[Signature]</i>	D2650	SHEET 4 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	206/407 SKIDTUBE ASSEMBLIES	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

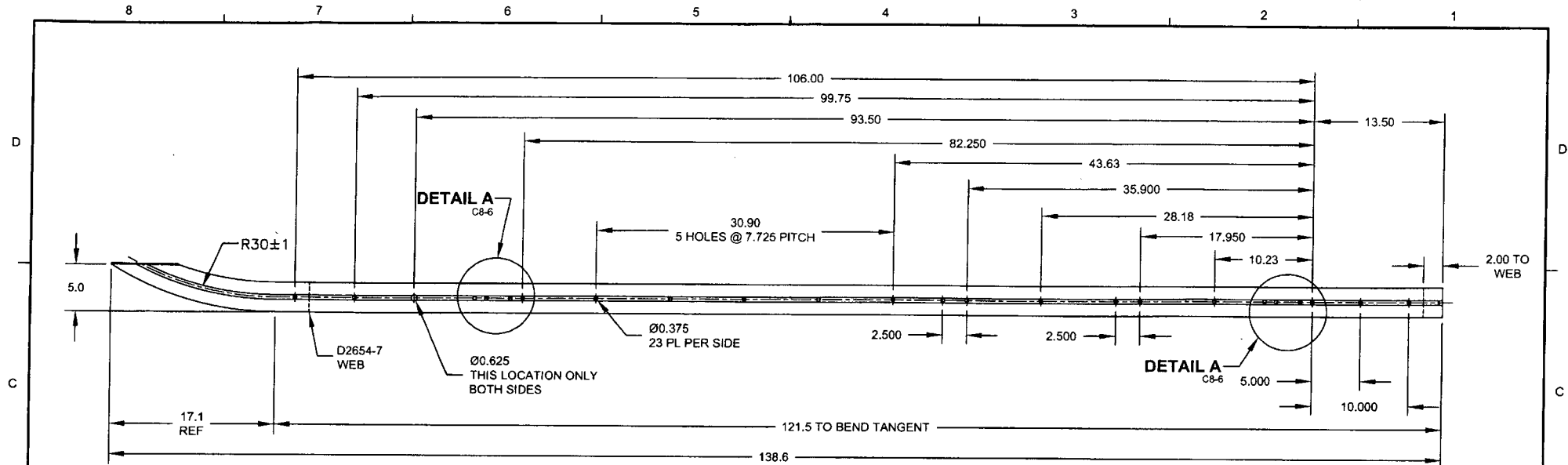
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

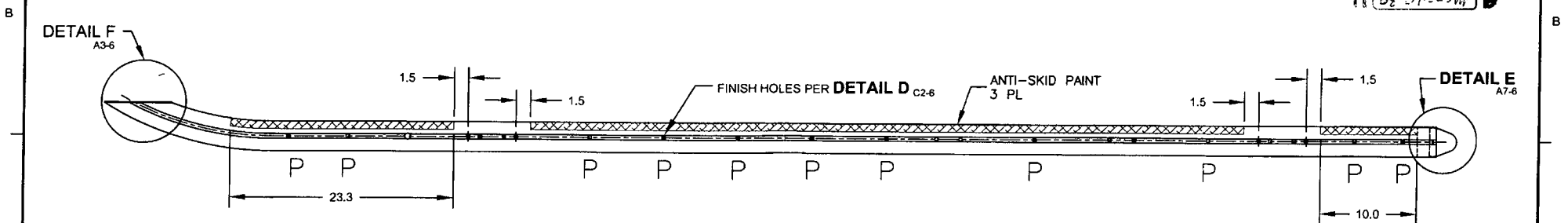
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78392



D2650-7 BENDING/DRILL DETAIL



D2650-7 ASSEMBLY/FINISHING DETAIL

RELEASED
08 07 22 / 111

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 5 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

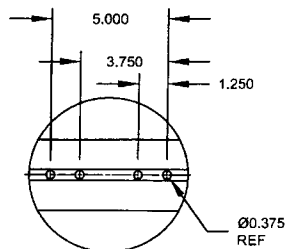
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

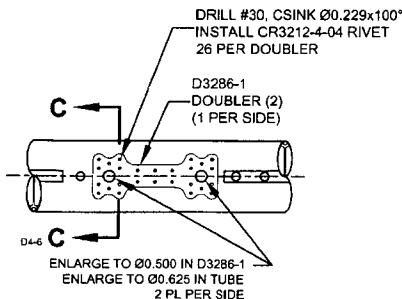
NOTE: Date & initial all entries

78392



DETAIL A
SCALE 2X

C2-2
D7-2
C2-3
D7-3
C2-4
D7-4
C2-5
D6-5



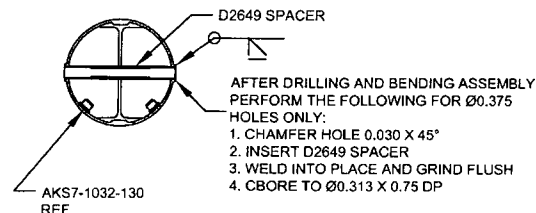
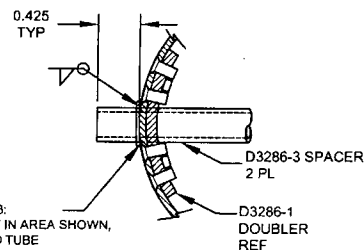
DETAIL B
SCALE 2X

C3-2
C3-3

- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.030x45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE.

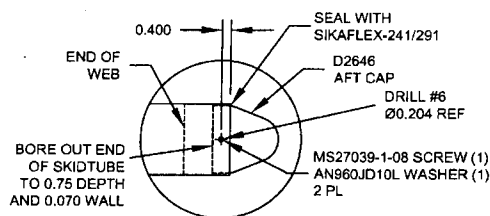


SECTION C-C C7-6
SCALE NONE



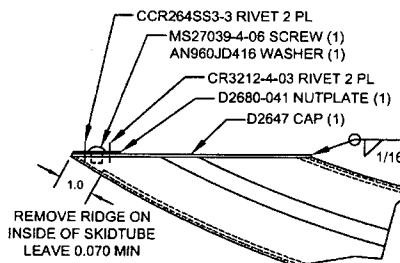
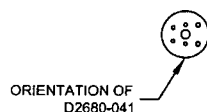
DETAIL D
FOR Ø0.375 HOLES ONLY
SCALE 3X

B4-2
B4-3
B4-4
B4-5



DETAIL E
SCALE 2X

B2-2
B2-3
B1-4
B1-5



DETAIL F
SCALE NONE

B8-2
B8-3
B8-4
B8-5

DETAIL F NOTES:

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

RELEASED
08-09-22-199

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 6 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 290

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 80956
Part number: A206-642-151
Description: Skid tube
Welding Process: Tig ☒ Mig ☐
Base material: Alum.
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier David Kessel Date of Test Coupon 12.04.18
Welder Barclay Elliott Date of Test Coupon 12-04-18

The above named individual is qualified in accordance with AWS D17.1.2001 to weld